

B1
from vinyl benzene having quaternary ammonium salt groups have been disclosed by Sheldon et al., U.S. Patent No. 4,532,128 for use with various medical and personal care products.

In the paragraph on page 6 from line 20 through line 28, please amend to fix the typographical error:

B2
~~In certain embodiments the quaternary ammonium groups are covalently bound to water~~
insoluble polymeric backbones making the antimicrobial non-leaching and thus providing persistent antimicrobial protection to a surface to which it is applied. This eliminates the need to periodically replenish the antimicrobially active substance for the life of the coating. Further, by immobilizing the antimicrobial substance as part of the coating, there is no release of potentially harmful substances to the environment during use. This is particularly desirable if the coating is used outdoors or if a particular use is likely to result in contact with humans or other higher life forms.

In the paragraph on page 10 from line 10 through line 21, please amend to fix the typographical error:

B3
In a further reaction scheme contemplated by the claimed invention, a polyol compound having vinylic functionality undergoes a reaction with a polyisocyanate to form a polyurethane prepolymer having excess isocyanate groups. A monol having a quaternary ammonium group may be added to at least a portion of the residual isocyanate groups. This intermediate polymer has vinylic functionality which can be combined with a quaternary ammonium compound having vinylic functionality by means of addition polymerization. The resulting isocyanate functional polyurethane can be chain lengthened to provide a polyurethane polymer with biocidal properties. It should be noted that the chain lengthening (i.e. chain extension) step can be performed before or after the vinyl polymerization. The inventors presently prefer to conduct the chain extension step followed by the vinyl polymerization reaction.

In the paragraph on page 11 from line 11 through line 27, please amend to fix the typographical error:

B4
Suitable polyisocyanates include organic compounds containing at least two free isocyanate groups. Diisocyanates of the formula $D(NCO)_2$ are preferably used wherein D

Bd
mt

denotes an aliphatic hydrocarbon group with 4 to 20 carbon atoms, a cycloaliphatic hydrocarbon group with 6 to 20 carbon atoms, an aromatic hydrocarbon group with 6 to 20 carbon atoms or an araliphatic hydrocarbon group with 7 to 20 carbon atoms. Diisocyanates (as well as difunctional polyactive hydrogen compounds) are preferred in order to ensure that the final polymer formulations are capable of forming films upon drying. If the crosslink density is too high film formation will not be possible. Preferred polymer solution or dispersion compositions upon drying (removal of solvent) coalesce sufficiently to form a self forming film at temperatures less than 50°C and preferably temperatures less than about 30°C. Most preferred polymer compositions are capable of forming a self supporting film at room ambient temperature (23-25°C). Characteristically these preferred materials are generally thermoplastic polymers. As used herein "self supporting" means that when the composition is dried down onto a release liner of suitably low surface energy, the film so formed once removed from the release liner is capable of supporting its own weight.

**In the paragraph on page 29 line 27 through page 30 line 5, please amend as follows:
Support is found in the specification as filed, for example, in claim 43.**

BS

Coatings produced from compositions of the present invention are suitable for any surface subject to deterioration or discoloration from microorganisms such as algae, mold, fungi, or bacteria. For example, construction materials such as roofing felts or lumber may discolor or decay over time if used in a moist environment. Other substrates include roofing shingles, roofing granules, tile, concrete, metal, polymers, cloth, fibers, and wood. The coatings may also be applied to inanimate surfaces in health care facilities to mitigate the spread of pathogenic organisms. Surfaces include hard surfaces such as walls, floors, furniture, food trays and "soft" surfaces such as bedding, uniforms and linen supplies. The coatings may also be applied to wound dressings on or in an absorbent pad, catheters and other in-dwelling devices, medical drapes, surgical sponges, diapers and the like to prevent microbial growth.

In the paragraph on page 36 from line 12 through line 18, please amend to fix the typographical errors:

h4

The films obtained from dispersions of Examples 1 and 3 were very hydrophobic, however, prolonged immersion of films in the water caused them to absorb some water.